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**UNIVERSIDADE DE LISBOA (ULISBOA)**

**BEST PRACTICE COLLECTION &  
BENCHMARKING OF QA IN DIGITAL TLA  
COUNTRY CASE – PORTUGAL**

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# **EU BEST PRACTICE COLLECTION & BENCHMARKING OF QA IN DIGITAL TLA**

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## **Introduction**

This report provides a comprehensive overview of quality assurance (QA) practices in digital teaching, learning, and assessment (TLA) at the Instituto Superior Técnico from Universidade de Lisboa (IST), within the Portuguese higher education context. It has been prepared as part of the EU Best Practice Collection & Benchmarking of QA in Digital TLA under the eCAMPUS project.

The report outlines the national and institutional frameworks for QA, highlighting the role of the Agency for Assessment and Accreditation of Higher Education (A3ES). It examines IST's approaches to digital course design, online assessment, learning analytics, student support, staff digital competence, accessibility, data protection, and infrastructure management. It further discusses IST's key QA principles, methodologies, and tools, the involvement of stakeholders, and the impact of these practices. The report concludes with reflections on the transferability of IST's experience to other higher education systems.

By situating IST's practices within national and European frameworks, this document aims to contribute to a comparative understanding of QA in digital education and to promote the exchange of effective approaches across institutions.

## **Section 1: Institutional & National Context**

In Portugal, quality assurance (QA) in higher education is structured within a robust national and European framework. The Agency for Assessment and Accreditation of Higher Education (A3ES), registered on EQAR, is the national body responsible for evaluating and accrediting institutions and study programmes. Its mandate includes mandatory accreditation of all programmes, as well as voluntary institutional audits to certify internal quality assurance systems (that includes the evaluation and assessment of the administrative/support services).

E-learning in Portuguese universities remains in a different level of developing. While Universidade Aberta (UAberta) has a longstanding tradition in distance education, most universities and polytechnics are progressively integrating digital technologies into their programmes, particularly since the COVID-19 pandemic. This transition accelerated national investments in ICT infrastructure, teacher training, and high-quality digital content, even that the national policies concerning IT and AI are launched before COVID.

A3ES plays a central role in ensuring the quality of e-learning programmes, applying specific criteria for distance education and collaborating with international experts to incorporate innovative practices such as synchronous and asynchronous learning. Its

standards aim to guarantee that digital education meets high-quality objectives and remains aligned with European benchmarks. At institutional level, IST has had its Quality Assurance System accredited by A3ES since 2013 (re-certified in 2020).

More recently, following changes in A3ES policy, IST became part of the integrated QA system of the University of Lisbon. Regarding digital education, IST previously offered a joint Master's in Business Information and Systems (MISE) with Universidade Aberta but currently focuses on MOOCs and the integration of digital technologies into face-to-face programmes. IST's MOOC portfolio includes 10 to 12 active courses per semester, accumulating over 36,000 enrolments since its launch in 2016.

## **Section 2: QA Focus Areas in Digital TLA**

### **2.1: Digital Course Design**

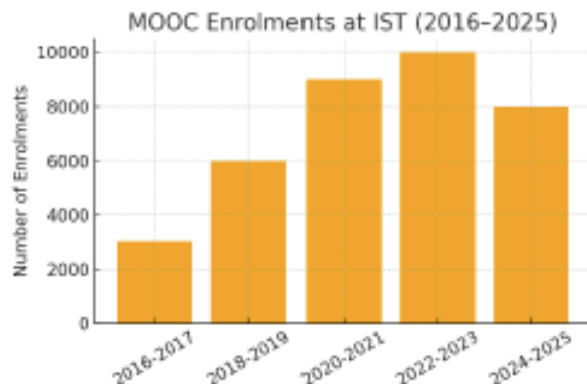
IST does not have a defined institutional pedagogical model for e-learning, as degree programmes remain primarily campus-based. However, during the COVID-19 pandemic, the Conselho Pedagógico (Pedagogical Council) developed guidelines for remote teaching, including tools for sharing good practices and recommendations for online delivery, available through the SARTRE - Recursos de Ensino e Avaliação (Teaching and Assessment Resources) portal ([link](#)) and its dedicated section on COVID-19 Guidelines ([link](#)).

Although full digital course design is not standard practice, IST curricula are flexible and modular, enabling integration of digital components where relevant. Tools such as Worksheets (FenixEdu), ExonlineX, Google Classroom, Quizzes Técnico and Socrative are commonly used to manage course organisation and content delivery. Course development follows a rigorous approval process involving Academic Units, the Management Board, the Scientific Board, the Pedagogical Council, and ultimately the School Council, before final approval by the University. Student learning profiles are taken into account by gradually introducing digital tools at beginner level and progressively increasing complexity in advanced programmes.

### **2.2: Online Assessment & Exams**

Since the pandemic, IST has increasingly adopted digital assessment through the ExonlineX@MOOC – Plataforma de Exames (Exams Platform) ([link](#)). The Conselho Pedagógico (Pedagogical Council) established guidelines and a code of conduct for online assessment to safeguard academic integrity, published via the SARTRE – Metodologias e Ferramentas de Avaliação (Assessment Methodologies and Tools) portal ([link](#)). While e-assessment is not uniformly applied across all programmes, it is widely used as a complement to traditional methods.

Figure 1: MOOC Enrolments at IST (2016–2025)



Authentication of students is ensured through the unified institutional login system (Técnico ID). To prevent academic misconduct, plagiarism detection software is used, and the library provides training to both students and faculty on academic integrity and ethical research practices.

### 2.3: Learning Analytics

Learning analytics has been the subject of growing interest at IST. While no dedicated learning analytics platform has been adopted, relevant data is collected via information systems and stakeholder surveys, which are analysed in self-assessment reports and Business Intelligence dashboards.

The most systematic form of learning analytics comes from the Course Unit Quality (QUC- Qualidade das Unidades Curriculares) surveys, where students evaluate programmes, teaching methods and instructors.

Low scores trigger follow-up actions, including pedagogical support from the Academic Development Unit and targeted training for faculty. Data on student performance and satisfaction is regularly shared with course coordinators and the Management Board to support programme improvement. All data is handled confidentially and in compliance with GDPR, ensuring ethical use of analytics. The best evaluated professors would be awarded in the Técnico's Day, in each 23<sup>rd</sup> of May.

### 2.4: Digital Student Support

IST offers academic, technical, and psychological support through both in-person and digital channels. Students may access pedagogical counselling and psychological services online, and support materials are made available digitally through the NDA – Núcleo de Desenvolvimento Académico (Academic Development Unit) – Materiais de Apoio (Support Materials) ([Link](#)).

The Informatics Services team provides remote technical assistance, including document validation, registration and enrolment, and maintains the IST Mobile App, which allows access to timetables, room availability, canteen menus, and appointment booking for student services. In addition, IST is piloting StudentPulse, a micro-survey system designed to monitor student well-being and adaptation to daily challenges.

Digital support is further reinforced through the Student Support Unit (NAPE – Núcleo de Apoio ao Estudante / Student Support Unit), which provides guidance on core platforms such as FenixEdu, FenixConnect and Exonline, and redirects students to IT services when necessary. The library complements this support by offering extensive training on the use of digital resources and databases.

## **2.5: Staff Digital Competence**

To ensure staff readiness for digital teaching, the Pedagogical Council coordinates the Digital+ programme, which provides training in digital pedagogy and tools. This is complemented by IT department support for the use of institutional systems and learning technologies.

Peer exchange is fostered through the Good Practices Observatory ([link](#)), which collects, evaluates and disseminates good practices proposed by the academic community. The Observatory also organizes an annual event for sharing and discussing teaching and service innovations. These practices extend across teaching, learning, research, and administrative activities, reinforcing the culture of digital competence and collaboration.

## **2.6: Digital Accessibility & Inclusion**

IST ensures accessibility and inclusion through a comprehensive set of measures that address both temporary and permanent conditions. Students with non-chronic conditions may be granted a temporary status, while those with chronic conditions can receive permanent recognition. In both cases, the Academic Development Unit and the Academic Division work directly with the student to define the most appropriate measures.

These can include adaptations in assessments, such as extended time, alternative formats, or reading and writing assistance provided by the Student Support Unit. Teachers are required to implement the accommodations defined in these plans.

Institutionally, inclusion is reinforced through the Special Needs Work Group, which ensures accessibility at all levels of the school. Broader equity issues are addressed by the DEI Observatory (Diversity, Equity and Inclusion), integrated in IST's Quality Assurance System to monitor diversity and inclusion indicators. In addition, a Gender Balance Group implements an action plan to promote gender equality policies and initiatives, while the IST Values Ambassadors – composed of representatives from services, departments, and the student body – work closely with well-being services to foster IST values and concrete actions towards inclusion and equity. Although multiple learning pathways are not formally established across programmes, some course units adopt such approaches.

## **2.7: Data Protection & Ethics**

IST adheres strictly to the General Data Protection Regulation (GDPR), ensuring that student data is processed lawfully, fairly and transparently. Data collection is limited to what is necessary for clearly defined purposes, and detailed internal records identify the responsible units, categories of data, purposes, and retention periods.

To safeguard information, IST has implemented robust technical and organizational measures, including encryption, firewalls, access control protocols based on the principle of least privilege, audit logs, antivirus systems, and secure infrastructures. Staff receive regular training in data protection and cybersecurity. Students have full rights to access, rectify, delete, transfer, or limit the processing of their personal data.

Requests are submitted through designated channels and answered within one month, extendable in complex cases.

Transparency is supported through clear communication procedures. Students are informed of their rights and notified of any changes in data processing, particularly when third-party transfers are involved. Consent is secured at enrolment through CONNECT (FenixEdu) and additional consent forms validated by the DPO are used for specific cases such as surveys.

Breaches are monitored by IT services and the DPO. In case of a confirmed incident, legal authorities and affected individuals are notified, and sanctions are defined externally. Internally, the focus lies on reducing risk, identifying root causes, and ensuring continuous improvement in ethical data handling.

## **2.8: Digital Infrastructure QA**

IST's digital infrastructure is managed through a risk-based approach and annual review of contingency measures. Core platforms include CONNECT (FenixEdu), which supports enrolment and course management; Moodle, the main Learning Management System; VPN services for secure remote access; and internal cloud and backup systems with disaster recovery protocols.

The annual Risk Plan identifies potential threats to each service and defines mitigation measures, which are complemented by technical audits and stress tests. Contingency and business continuity plans are updated regularly. Accessibility is embedded in digital provision: platforms are compatible with assistive technologies such as screen readers, and subtitling and captioning tools are gradually integrated to support universal design for learning.

## **Section 3: Key QA Principles and Criteria**

IST's QA system is rooted in continuous improvement, transparency, social responsibility and innovation. These principles are embedded into all academic and administrative processes and are formally integrated into the institution's strategic documents. The system is based on regular self-assessment and self-regulation mechanisms, with outcomes used to inform institutional planning, resource allocation, and programme development.

Beyond internal commitments, IST aligns with internationally recognised frameworks, notably the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG 2015) and ENQA principles. This alignment ensures that institutional QA practices meet global benchmarks of excellence and comparability.

## **Section 4: QA Methodologies and Tools**

IST applies a combination of internal and external QA methodologies. Internally, data analytics and dashboards provide indicators on student demographics, performance, graduation rates, employability and satisfaction. Results from surveys – including programme-level QUC evaluations, graduate surveys, and employer feedback – are systematically analysed and disseminated.

Externally, IST programmes are accredited by A3ES under a six-year cycle with annual monitoring, while research units are evaluated by FCT in five-year cycles. Both processes

include site visits and peer reviews. Additionally, internal and external audits are conducted at multiple levels to ensure compliance and promote transparency.

Although IST does not have QA practices specifically adapted to e-learning, the institution is increasingly exploring quality mechanisms for digital environments, particularly following the pandemic-driven expansion of online teaching.

## **Section 5: Stakeholder Involvement**

Stakeholders are systematically involved in IST's QA system. The QA Council includes permanent representatives from students, faculty, researchers and staff, with the possibility of inviting external stakeholders when relevant. Regular surveys ensure the participation of all groups, with QUC questionnaires serving as a primary tool for student feedback.

Graduate and employer surveys complement this information, ensuring that QA processes integrate perspectives from both internal and external communities.

## **Section 6: Results, Impact and Lessons Learned**

The implementation of IST's QA system has produced measurable improvements in service provision and efficiency, driven by a more systematic listening to stakeholders. Feedback mechanisms have contributed to curricular adjustments, enhancements in student digital services, and improvements to institutional platforms such as CONNECT.

The QA culture has become more widely embedded, raising awareness of continuous improvement across the academic community. At the same time, IST recognizes the ongoing challenge of sustaining stakeholder engagement. Innovative approaches are needed to ensure participation and to effectively communicate back to the community how feedback has informed institutional change.

At national level, the creation of A3ES in 2007 transformed QA from a bureaucratic exercise into an intrinsic element of higher education governance. The shift from programme-level accreditation to institutional-level certification reflects the maturity and evolution of QA in Portugal.

## **Section 7: Documentation & References**

[CGQ – Comissão de Garantia da Qualidade do Técnico \(Técnico Quality Assurance Committee\)](#)

[Manual da Qualidade do Técnico \(Técnico Quality Manual\) \(PDF\)](#)

[QUC – Questionários Pedagógicos \(Pedagogical Questionnaires\)](#)

[Indicadores Técnico \(Técnico Indicators Platform\)](#)

[Plano Estratégico IST \(Técnico Strategic Plan\)](#)

[A3ES – Agência de Avaliação e Acreditação do Ensino Superior \(Agency for Assessment and Accreditation of Higher Education\) – Accreditation of Study Programmes](#)

[Conselho Pedagógico – Guidelines COVID-19 \(Pedagogical Council – COVID-19 Guidelines\)](#)



## **Section 8: Reflections and Transferability**

IST's QA system demonstrates practices that may be transferable to other institutions, such as the DEI Observatory for monitoring inclusion indicators, the use of mixed QA cycles combining semester, annual and multi-year reviews, and the active involvement of students in QA structures through the Council and IST Values Ambassadors.

These mechanisms foster inclusivity, transparency, and accountability in ways that could benefit other higher education contexts.

At the same time, IST acknowledges the limitations of its system and the need to learn from international peers, particularly in digital teaching and stakeholder engagement. Benchmarking with institutions that have developed advanced QA frameworks for online education offers valuable insights. This openness to learning and adaptation positions IST within a European and global dialogue on quality assurance.